

Apples – Journal of Applied Language Studies
Vol. 14, 1, 2020, 7-24



Students' perspectives on English medium instruction within higher education – exploring gender differences in Norway and Finland

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This study aims to explore gender differences in students' perspectives on language use within higher education (HE), using data from a survey distributed to students at two universities in Norway and Finland. Analysing responses concerning language use in HE, I found that most students were positively inclined towards English medium instruction (EMI). However, while there in both countries were only small differences in attitudes towards EMI between male and female students, in Finland, female students were less confident in their English skills than male students were. Furthermore, female students in both countries reported more difficulties in coping with English in their day-to-day studies, as compared to male students. This article demonstrates the advantages of applying a multidimensional perspective when analysing gendered attitudes in HE. Further, the present study highlights some of the practical challenges that HE institutions should acknowledge in order to implement language policies that meet students' needs.

Keywords: language skills, student attitudes, gender, higher education, EMI

1 Introduction

Language use within academia has been hotly debated over the last decades, both within the higher education (HE) sector, and in society at large. Central to the debate are the universities' twofold obligations of facilitating the need for internationalisation and, at the same time, developing the national language(s) so that they can be used in research, education, and dissemination (Gregersen et.al., 2014; Hultgren, Gregersen, Thøgersen, & Haberland, 2014).

The HE sector is steadily increasing its' internationalisation efforts through the development of policies, and in the practices undertaken by academic institutions and individuals to cope with a global academic environment (see Airey, Lauridsen, Räsänen, Salö, & Schwach, 2017; Altbach & Knight, 2007), and English Medium Instruction (EMI) has been one of the most noticeable features of this trend. EMI refers to teaching purposes in non-Anglophone settings where, in contrast to Content and Language Integrated Learning (CLIL), language learning in itself is not explicitly stated as part of the learning objective. As defined by Macaro, Curle,

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ISSN: 1457-9863

Publisher: Centre for Applied Language Studies

University of Jyväskylä

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<http://apples.jyu.fi>

<http://dx.doi.org/10.17011/apples/urn.202002272211>



Pun, An, & Dearden (2018, p. 37) EMI is ‘the use of the English language to teach academic subjects (others than English itself) in countries or jurisdictions where the first language of the majority (...) is not English’. In the present study, EMI refers to teaching where English is introduced in lectures and/or the syllabus as the result of more or less planned actions, e.g. to accommodate to lecturers’ language proficiency and the availability of suitable syllabus.

Despite the growing body of research on language use in HE, there is still a need for a more comprehensive understanding of how students experience the languages they meet in their first years of studies. In their systematic review on the status of EMI internationally, Macaro et al. (2018) call for more research into variables that can contribute to an overall conclusion of where EMI is going. One of these factors being the ‘beliefs held by female and male students as both L2 learning and certain academic subjects tend to be gendered’ (Macaro et al. 2018, p. 55).

1.1 Gender and confidence

Language studies suggest that women outperform men in actual English proficiency (Education First, 2016; van Der Slik, van Hout, & Schepens, 2015). However, when the goal is to explain differences in attitudes towards language use, one would expect language confidence to be just as important as actual language proficiency. Colman (2015) defines self-confidence as a belief in oneself and a trust in one’s general abilities or in the abilities needed for specific situations or activities. Confidence is identified as an important factor for academic performance (Robson, Francis, & Read, 2004), and high confidence is recognized as imperative for the ability to present convincing arguments and enter examinations anticipating success (Leman, 1999; Read, Francis, & Robson, 2001).

The association between gender and confidence in performance-based situations has been investigated in the field of educational research. In these studies, female students are reported to experience higher levels of academic stress and anxiety than male students do (see Abouserie, 1994; Misra & McKean, 2000), and female students are less confident in their speaking skills (Pulford & Sohal, 2006; Thompson & Sylvén, 2015). They are less likely to speak up in class (Sommers & Lawrence, 1992), and by that they receive less classroom time (Romaine, 2003). Female students have also been found to experience difficulty in coping with exam stress and developing confidence with their own academic abilities (Harrop, Tattersall, & Goody, 2007). This has often been referred to as the ‘chilly classroom effect’, after a report by Hall & Sandler (1982). Further, research on learning style and classroom climate shows that while female students perform better than male students in many areas, some female students report getting good grades in spite of their negative experiences with the classroom climate (Salter, 2003).

Macaro & Akincioglu’s (2018) recent study of Turkish university students’ perceptions of EMI showed that whereas little or no differences were found between genders in terms of how they coped with EMI, female students apparently found it more difficult to speak in front of peers and lecturers than male students did. Potential gender differences, either when it comes to actual performance (i.e. English Proficiency Index) or when it comes to subjective measures such as confidence, should be investigated further. Especially, one

should study whether the general patterns where female students report lower confidence levels and are less likely to speak up in class (see Harrop et al., 2007; Romaine, 2003) are also found when studying the implications of language use within the sector.

1.2 Aims of the study

In this article, I aim to explore gender differences in perspectives on language use within the HE context, analysing survey data from two major universities, one in Norway and one in Finland. I have sought to answer the following research questions:

- 1) Are there systematic differences between male and female students' confidence in English skills?
- 2) Are there systematic differences between male and female students' perceptions of what language(s) they learn most efficiently in?
- 3) Is there a difference between male and female students in their attitudes to the potential benefits of EMI for future studies and work?
- 4) To what extent are there differences between male and female students in how they experience language practices to impact their studies?

2 The Nordic 'laboratory'

On the societal level, the countries in the Nordic region are remarkably similar (Hultgren et al., 2014). Based on the linguistic and socio-historical realities of the Nordic countries, Kristiansen & Sandøy (2010, p. 1) suggest that this region 'makes up a well-suited 'laboratory' for research into the contexts and consequences of today's globalization and the general advance of English'.

While the process of implementing English as the *lingua franca* at HE institutions is a global phenomenon, Wächter & Maiworm (2014, p. 17) point to the Nordic countries and the Netherlands as having gone particularly far in the implementation of English as *the* language for research and HE. They report that 61 per cent of institutions in this region offer bachelor and master programmes entirely taught in English. When explaining the relatively strong position of English in Nordic HE, Airey et al. (2017) point to moderate populations, and thereby smaller HE institutions, which makes it too costly and time-consuming to translate and develop the national language(s), ultimately leading to the vast intake of English.

However, despite the influx of English, national languages have maintained a strong position within Nordic HE (Gregersen et al., 2014; Hultgren et al., 2014). This dual role has led to policy development in HE institutions in all five countries focussing on the parallel use of English and the national language(s) (see for instance Björkman, 2014; Hultgren, et al. 2014; Kuteeva, 2014; Ljosland, 2015; Saarinen & Taalas, 2017).

The existing literature on EMI and language use within Nordic HE has put major emphasis on how knowledge and learning processes should be understood as results of disciplinary knowledge-building structures (Airey & Linder, 2009; Airey, 2011; Kuteeva & Airey, 2014). Existing research has devoted less focus to the association between gender and perspectives on the languages they meet in the educational context. An exception is Lueg & Lueg (2015), who discuss the role

of gender and socio-economic status in a Danish business school. They found that, when given the choice, male students from higher strata and female students from lower strata chose EMI programmes, while male students from lower strata and female students from higher strata chose Danish programmes. Based on their findings, one could hypothesise that there may be systematic differences in language attitudes between female and male students.

3 Methods

This study is based on a survey conducted from 2015 to 2017 at two major universities in Norway and Finland. The survey was approved by both universities, and by the Norwegian Centre for Research Data (NSD).

3.1 Participants

Students within three disciplinary fields were invited per email to participate in an online survey, with email-addresses provided by the universities. Assuming that their first years of education are crucial for how well students adapt to HE, I chose to include only bachelor students in the study.

To ensure that students from different disciplinary backgrounds were represented in the study population, I sampled courses from three different educational fields: law, philosophy, and chemistry and physics, which were later collapsed into the broad heading of natural sciences. These fields can be described as soft pure, soft applied, and hard pure, respectively, using the division of study fields found in (Becher & Trowler, 2001; Neumann, 2001). Thus, students from three study fields, philosophy (*soft pure*), law (*soft applied*) and natural sciences (*hard pure*), were invited to participate in the survey. Common to the three disciplines is that none of them are pure EMI-programmes. Rather, they are programmes where both English and the local language(s) are used to a greater or lesser extent.

At the Norwegian university, approximately 65 philosophy students, 130 natural science students and 2060 law students received an invitation to participate. Because of the way the law programme is organised, all students enrolled in the programme at the Norwegian university received an invitation. To keep the law student group as similar to the other two bachelor programmes as possible, all students who exceeded three years of study were excluded from the survey. Accounting for the total enrolment within the fields, the distributions of students within the three fields in Norway were as follows: natural sciences and philosophy 60%, law 20%. At the Finnish university, the survey was distributed to approximately 2300 students. Due to the way the contact information at this university was organized, the exact distribution of students between the disciplines is not known.

As summarised in Table 1 below, 571 students completed the survey. The number of respondents differed between the two universities. This is most likely due to the Norwegian students receiving the invitation to participate through their private email addresses, while Finnish students received the invitation through their student email (the assumption being that students check their private email addresses more regularly than they check their student accounts).

Table 1. Summary of the student group participating in the present study. Numbers are based on valid cases for each variable and may lead to total numbers differing.

| Variables | | Finland | Norway | Total |
|---|--------------------|--------------|--------------|----------|
| Country | | 225 (39.4 %) | 346 (60.6 %) | 571 |
| Students | Female | 112 (49.8%) | 193 (55.8%) | 305 |
| | Male | 111 (50.2%) | 147 (42.5%) | 258 |
| Median age | | | | 22 years |
| L1 | Finnish | 196 (85.6%) | | 196 |
| | Swedish | 22 (13.5%) | | 22 |
| | Norwegian | | 310 (88.7%) | 310 |
| | More than one L1 | 1 | 16 | 17 |
| | Other ¹ | 7 | 46 | 53 |
| Previous education² | Yes | 37 (16.5%) | 158 (45.7%) | 192 |
| | No | 185 (82.3%) | 188 (54.3%) | 372 |
| Disciplinary field³ | Philosophy | 10 (5.5%) | 39 (11.3%) | 49 |
| | Natural Sciences | 111 (48.1) | 80 (23.1%) | 191 |
| | Law | 74 (33.3%) | 225 (65%) | 299 |
| Years into education⁴ | First year | 68 (29.1%) | 119 (34.4%) | 185 |
| | Second year | 55 (23.6%) | 124 (35.8%) | 176 |
| | Third year | 102 (47.3%) | 103 (29.8%) | 203 |
| Students planning to study abroa | | 133 | 172 | 304 |

¹ 'Other' refers to students who reported another language than one of the local language(s) as their first language, but that did not report to have more than one L1.

² 'Previous education' refers to previous studies in the HE context before enrolling in one of the three educational programmes law, philosophy and natural science.

³ The differences in response rates seem to be in proportion to the total enrolment in each field.

⁴ To make the groups as similar as possible, all students who had studied for more than three years, the nominal length of the bachelor programmes, were excluded from the study.

In both countries, there was a slight majority of female respondents. The distributions are roughly comparable to the student population as a whole. At the time when the surveys were conducted, the student population in Norwegian HE is made up of roughly 60% women and 40% men (Statistics Norway, 2016). For Finland, these numbers are approximately 55% women and 45% men (Statistics Finland, 2017).

3.2 The survey and data collection

In addition to provide biographical information, such as students' first language(s) (L1), gender, and study field, students evaluated fixed questions and statements on five-level Likert-items. The students evaluated 19 statements, concerning topics such as students' self-reported English skills, languages and their importance for further studies and work, languages' role for learning, and classroom participation. The survey was offered in the national language(s) and English in both countries. Students in the Finnish sample could choose to respond in Finnish, Swedish or English, while students from the Norwegian university were offered the survey in the two official written standards (Norwegian Bokmål and Nynorsk) and English.

3.3 Statistical analyses

Confidence was measured through four variables concerning students' evaluation of their own competence in their receptive English skills (reading, listening to and understanding) and their productive skills (speaking and writing). These variables were first analysed separately, and then collapsed into a single *skills index*. The index was computed through adding the values of reading, listening to, speaking and writing for each student. This sum score was normalized to a 1-5 scale.

Further, to study whether students' judged English to play an important role for further studies and work, I constructed an *EMI index* on the basis of students' evaluations of the following three statements on the potential benefits of using English:

- I feel better prepared for future work when I use English actively in my education.
- It is important to learn how to use English properly for further studies and work.
- Accustoming oneself to using English is a competitive advantage when applying for jobs.

The EMI index was computed through adding the values of the three statements for each student. This sum score was normalized to a 1-5 scale. The indexes, which were developed in a previous paper (Bukve, 2018) are composite measures that represent certain theoretical concepts. Variables included in the indexes represent similar but not identical aspects of attitudes towards language skills and language use. In this way, the indexes have an improved content validity compared to analysing single questions. The choices of which questions to be included in the indexes, were based on theoretically informed considerations of important aspects of self-evaluation of skills and attitudes towards the role of English in HE. The Chronbach's alpha for the EMI index was .734 in the Finnish sample, and .818 in the Norwegian sample. For the skills index, the Chronbach's alpha was .892 in the Finnish sample and .910 in the Norwegian sample. These tests indicate that the validity of the measures were satisfactory.

I chose to use parametric tests on the indexes which I treated as interval data, whereas I treated the data on the single measure-variables as ordinal data on which I used non-parametric tests. Answers to single questions were analysed by comparing mean scores of groups with 95% confidence interval, and testing differences using Mann Whitney U-tests. Effect sizes were calculated as rank biserial correlation, following Wendt (1972). The difference in mean scores on the EMI index between countries was tested using independent sample t test, not assuming equal variance. Multiple linear regressions were carried out with the indexes as response variables. Gender and other theoretically relevant variables were added as predictor variables. In addition, I constructed an interaction variable between country of study and gender, to account for differences between the countries in gendered patterns of attitudes. The following predictor variables were included in the final multivariable models:

- Country
- Gender
- Interaction term (country and gender), showing the effects of female students in Finland

- Disciplinary fields
- Whether or not students had experiences with previous education
- In addition, the skills index was included as a predictor variable in the final EMI model.

When testing the assumptions of the regression analyses, a special area of concern was the potential interaction effects between country of study and other predictor variables in the models. To account for any such effects, I constructed interaction variables between country of study and each predictor variable, and evaluated whether these had any effect on the model. As none of the other interaction variables had any significant effects, the final models included only the interaction between country and gender. I calculated Mann Whitney U test statistics and effect sizes in STATA version 16, and used SPSS version 25 for the other statistical analyses.

4 Results

4.1 Language and confidence

The survey shows that both male and female students are on average relatively confident in their own English skills. Even so, there are differences between male and female students. Figure 1 shows that both male and female students are more confident in their receptive skills than their productive ones. Both male and female students tend to evaluate their English competence favourably, but male students more so than female students. This tendency is visible in both countries, however when testing the differences using Mann Whitney U test, they are statistically significant only in Finland (reading: $Z = -4.78$, $p = <.001$, $r = .33$; listening: $Z = -3.39$, $p = <.001$, $r = .24$; speaking $Z = -2.09$, $p = <.05$, $r = .15$; writing: $Z = -3.79$, $p = <.001$, $r = .28$).

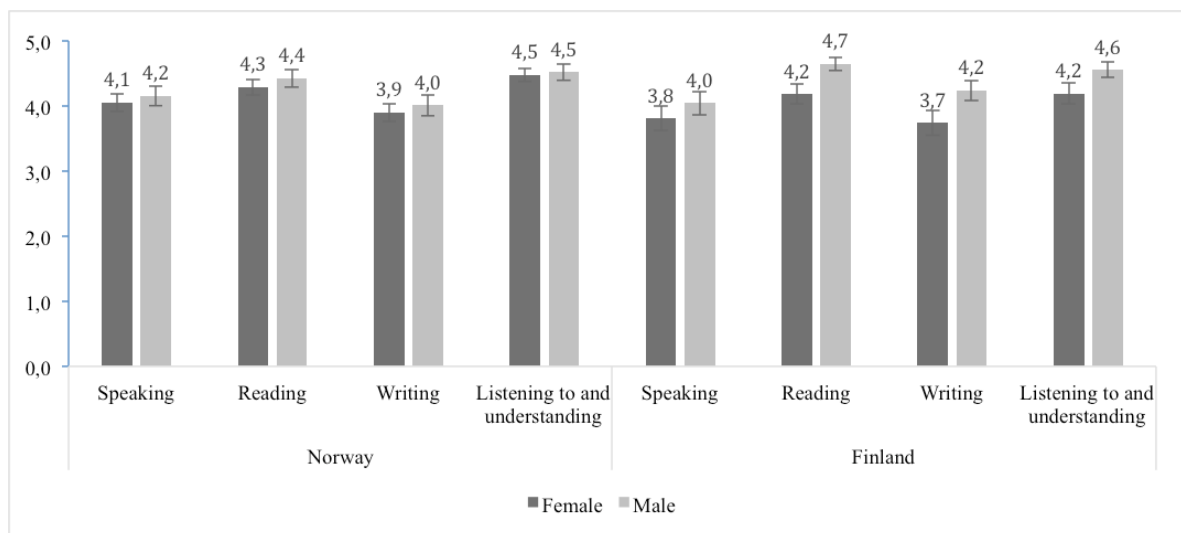


Figure 1. Mean score of students' self-reported skills in English by gender. Confidence intervals of 95% are indicated using error bars. $N = 563$.

Students were asked to rate their skills in the following question: “How would you describe your skills when it comes to: *Speaking in English?*; *Reading in English?*; *Writing in English?*; *Listening to and understanding English?*”. The answer to these three statements were added together, into a single measure.

When asked what language gave best learning effect, the students could choose between either their L1 or English, or both. The answers are summarised in Figure 2 (students who did not choose any of the alternatives are not included).

These results are interesting, as they show that there is little consistency between countries and gender in how students evaluate the learning effects of L1 and English. In Norway, a majority of students chose only L1, while in Finland, more students chose both L1 and English. There were few students in either country who only chose English. The answers differed between genders in both countries, with female showing a preference for only L1. However, male students in Finland were the only group where a majority chose both L1 and English.

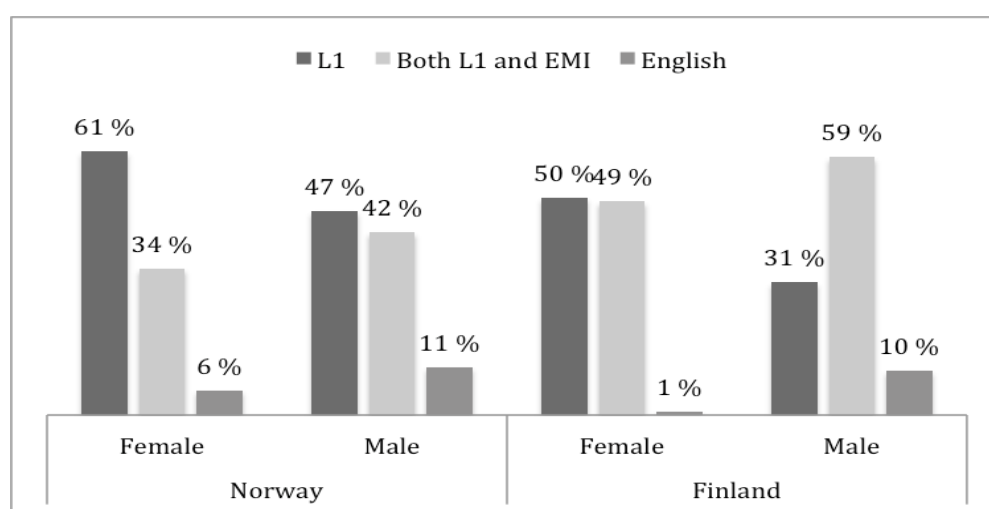


Figure 2. Students' accounts of what language gives them best learning effect. N = 572.

To analyse the impact of gender, along with other factors, on confidence, I used the skills index as a response variable in a multiple regression analysis. In the skills index, the variables *speaking*, *reading*, *writing*, and *listening to*, were collapsed into a single five-point scale.

Table 2. Effects of gender and country on language confidence in multiple regression analysis. N= 552.

| | B ¹ | SE | t | p-value |
|-----------------------------------|----------------|------|-------|---------|
| Finnish students | .166 | .096 | -1.73 | .085 |
| Female students | -.061 | .083 | -.735 | .463 |
| Finnish female² | -.321 | .129 | 2.50 | .013 |
| Philosophy students | .216 | .116 | 1.86 | .064 |
| Natural science students | .029 | .072 | .40 | .689 |
| Previous education | .140 | .070 | 2.00 | .046 |
| Constant | 4.161 | .076 | 55.05 | <.001 |

¹Dependent variable: Score on the skill index (ranging from 1 to 5). B are unstandardised coefficient estimates adjusted for the other variables included in the table.

²The coefficient for Finnish female is calculated using an interaction term of Finnish students * Female students. Hence, the predicted effect for Finnish female is: Female students + Finnish female.

Table 2 shows that, when controlling for other variables such as previous education and disciplinary fields, the difference between genders is clear in Finland, where the predicted score for female students on the five-point skills index is .382 lower than for male students. In Norway, on the other hand, the difference between male and female students, when controlling for other variables, is negligible (the predicted score of female students is .061 lower than that of male students). Figure 3 graphically displays the results from Table 2, showing the predicted scores of male and female students from Norway and Finland on the skills index.

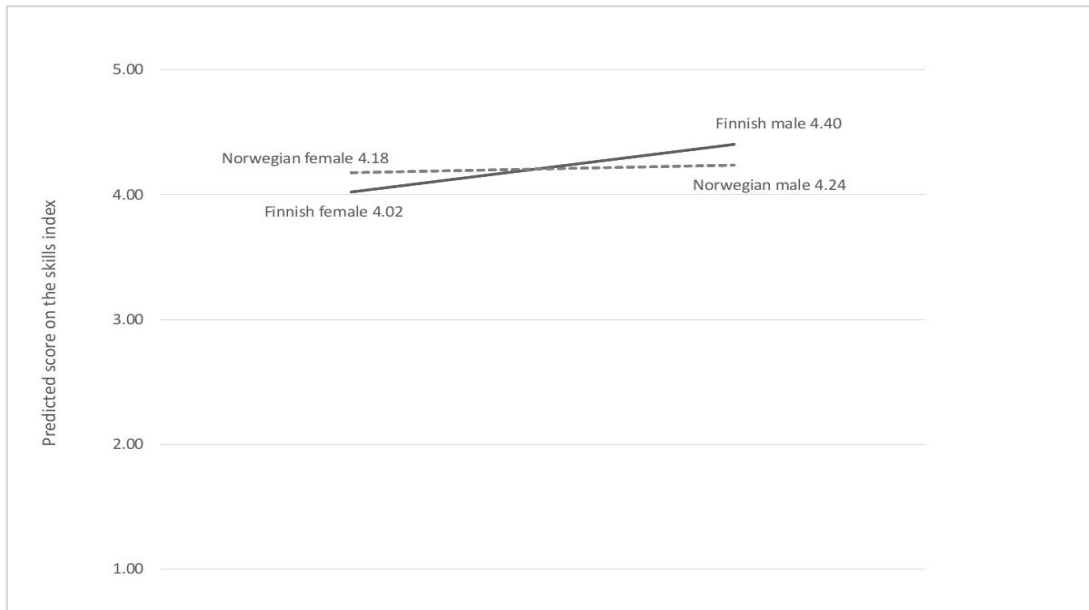


Figure 3. Predicted scores on the skills index for male and female students in the two countries. N = 552.

4.2 Students attitudes towards the potential benefits of EMI

The EMI index includes statements that reflect positive aspects of using EMI for further studies and work opportunities.

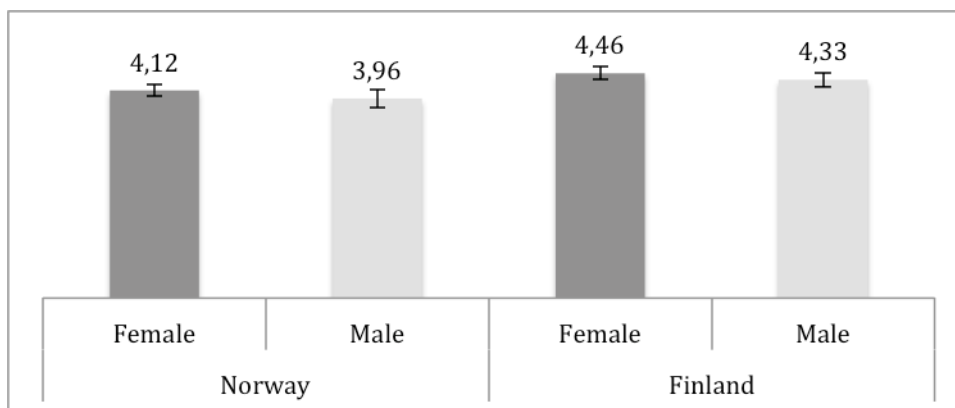


Figure 4. Mean and confidence intervals of male and female attitudes towards the EMI index. N = 508.

Figure 4 shows that students in Finland, independent of gender, exhibit more positive attitudes towards the EMI index. Finnish students had an average score of 4.4, while Norwegian students had an average of 4.1. This difference is statistically significant when tested using t test ($t = 4.93$, $p < .001$). The difference between male and female students is negligible.

Using the EMI index as response variable, I added country of study, gender, and score on the skills index as study variables. Disciplinary fields and previous education were included as control variables.

Table 3. Attitudes towards the EMI index, dependent variable ranging from 1-5. $N = 493$.

| | B¹ | SE | t | p-value |
|-----------------------------------|----------------------|-----------|----------|----------------|
| Finnish students | .259 | .106 | 2.44 | .015 |
| Female students | .153 | .092 | 1.66 | .097 |
| Finnish female² | .134 | .140 | 0.95 | .342 |
| Philosophy students | -.112 | .132 | -0.85 | .397 |
| Natural science students | .080 | .078 | 1.02 | .308 |
| Previous education | .005 | .077 | 0.06 | .397 |
| Skills index | .369 | .047 | 7.78 | <.001 |
| Constant | 2.402 | .212 | 11.340 | <.001 |

¹ Dependent variable: Score on the skill index (ranging from 1 to 5). B are unstandardised coefficient estimates adjusted for the other variables included in the table.

² The coefficient for Finnish female is calculated using an interaction term of Finnish students * Female students. Hence, the predicted effect for Finnish female is: Female students + Finnish female.

The regression analysis shows that, when controlling for other factors, there is a tendency that female students are more positive than male students towards EMI. This is, however, only a slight difference. In Norway, which has the smallest difference in predicted EMI index score between the genders, female students' predicted score is .153 higher than for male students on the five point scale ($p = .097$). In Finland, the predicted difference is slightly more pronounced. While the difference between female and male students in means on the EMI index was only .13 (see Figure 4), the multivariable analyses predicts that female students score .287 above the predicted score of male students, when controlling for other factors (including language confidence). It is however important to note that the difference between Norway and Finland, in terms of effect of gender, is statistically insignificant.

As was the case when analysing predicted scores on the skills index, there was a significant difference between countries of study. Controlling for other factors, students at the Norwegian university were not as positive towards EMI as students at the Finnish university. The predicted scores of students in Finland were .393 and .259 higher than that of students in Norway, for female and male students, respectively. Figure 5 graphically displays the results from Table 3, showing the predicted scores of male and female students from Norway and Finland on the skills index.

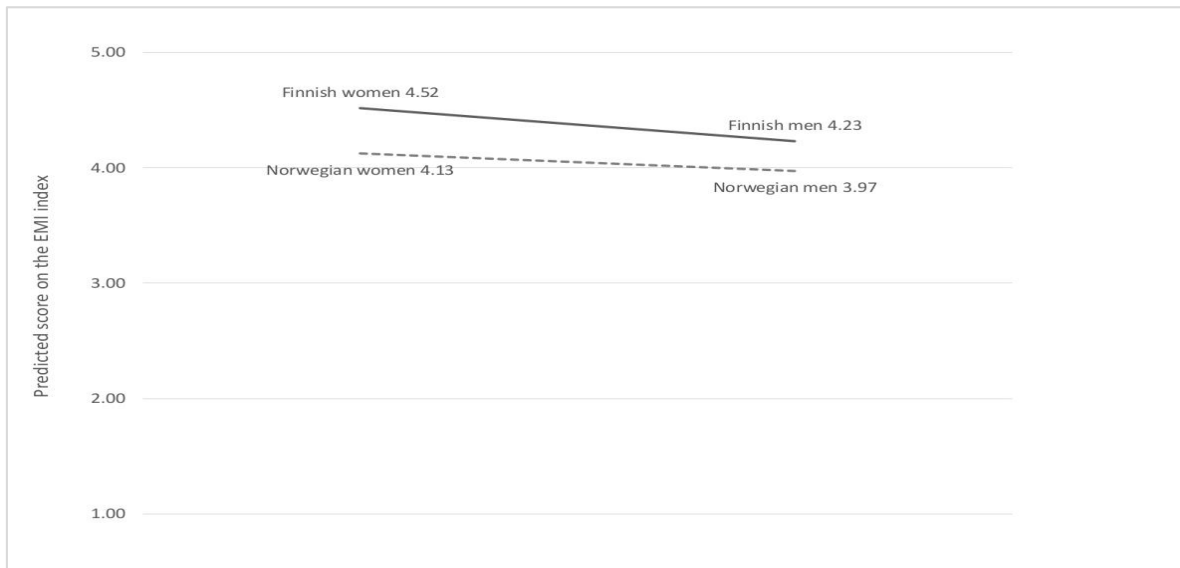


Figure 5. Predicted scores on the EMI index for male and female students in the two countries. N = 493.

Finally, confidence in one's own skills is an important explanatory factor. Each added point on the skills index increased the predicted value of the score with .369. In other words, controlling for other factors, the difference in EMI score between those with high skills index score and those with low skills index score is greater than the difference in EMI score between female and male students.

4.3 Students' perspectives on language practices in their studies

The third aspect of language attitudes relates to how students perceive the language practices in their everyday studies. Students were asked to rate their agreement or disagreement with three statements on the five-level Likert-item. Table 4 summarises differences between male and female across three different statements regarding how they perceive language use in the HE context.

Table 4. Summary of mean scores and confidence intervals sorted by country and gender. Students replied to a five-level item: 1 (strongly disagree/ very negative) to 5 (strongly agree/ very positive). Mean values and 95% confidence interval (CI) with lower limit (LL) and upper limit (UL). N = 563.

| | | | Norway | | | | | Finland | | | | Total | | |
|--|--------|-----|--------|---------|------|-----|----------|---------|------|-----|----------|---------|------|--|
| Question/measure | Gender | n | Mean | 95 % CI | | n | Mea n | 95 % CI | | n | Mea n | 95 % CI | | |
| | | | | LL | UL | | | LL | UL | | | LL | UL | |
| <i>I participate less when discussions are held in English</i> | Female | 165 | 3.22 | 2.98 | 3.46 | 104 | 3.07 | 2.81 | 3.34 | 254 | 3.16 | 2.98 | 3,34 | |
| | Male | 125 | 2.69 | 2.42 | 2.96 | 105 | 2.20 | 1.98 | 2.41 | 210 | 2.48 | 2.30 | 2,67 | |
| <i>I spend more time understanding content in English academic texts</i> | Female | 180 | 3.37 | 3.17 | 3.42 | 105 | 3.65 | 3.41 | 3.89 | 258 | 3.50 | 3.34 | 3,66 | |
| | Male | 134 | 2.89 | 2.64 | 3.14 | 104 | 2.95 | 2.67 | 3.22 | 214 | 2.94 | 2.74 | 3,14 | |
| <i>I spend more time remembering content in English academic texts</i> | Female | 180 | 2.73 | 2.52 | 2.94 | 105 | 3.15 | 2.92 | 3.38 | 258 | 2.91 | 2.74 | 3,07 | |
| | Male | 134 | 2.48 | 2.24 | 2.72 | 104 | 2.50 | 2.25 | 2.74 | 214 | 2.49 | 2.30 | 2,67 | |

Table 5. Summary of Mann-Whitney tests by country. Test statistics show U, Z-scores, p-values and effect size (r). N = 563.

| | Finland | | | | Norway | | | | Total | | | |
|--|---------|-----|-------|------|--------|-----|------|------|-------|-----|-------|------|
| | U | Z | p | r | U | Z | p | r | U | Z | p | r |
| <i>I participate less when discussions are held in English</i> | 3473 | 4.7 | <.001 | 0.36 | 8378 | 2.8 | .05 | 0.19 | 22818 | 5.2 | <.001 | 0.26 |
| <i>I spend more time understanding content in English academic texts</i> | 4216 | 3.5 | <.001 | 0.27 | 11097 | 2.6 | <.01 | 0.16 | 29337 | 4.2 | <.001 | 0.20 |
| <i>I spend more time remembering content in English academic texts</i> | 3844 | 3.8 | <.001 | 0.30 | 10859 | 1.6 | .10 | 0.10 | 28334 | 3.4 | <.001 | 0.17 |

Tables 4 and 5 show that, independent of country, there are systematic differences between male and female students in how they evaluate the three statements reflecting potential challenges with EMI. Male students in both Finland and Norway agree less with statements concerning challenges with EMI than female students do, though not all differences are equally substantial.

Female students consistently agree more with the following three statements: (1) 'I participate less when discussions are held in English' (female mean score 3.16, vs. male mean score 2.48), (2) 'I spend more time understanding English academic texts' (female mean score 3.50, vs. male mean score 2.94). On average, both male and female students are less in agreement with the statement 'I spend more time remembering English academic texts'. However, female students have a mean score of 2.91, whereas male students have a mean score of 2.49. The differences are significant when comparing answers from male and female students for the total study population, and the tendency for female students to agree more with these three statements is consistent for both countries. The differences are relatively pronounced in Finland, but less so in Norway, where the differences between means for male and female students towards the statement 'I spend more time remembering English academic texts' is not statistically significant.

5 Discussion

In this study, I addressed the role of gender in forming attitudes towards language practices in HE. To my knowledge, the present study is the first survey studying gender differences in attitudes towards language use in HE, which includes students from more than one country. The aim of the study was to explore how male and female students evaluate language use within the HE context from three perspectives. To study these perspectives, four research questions were formulated, relating to the following three topics: (1) language confidence and learning effect, (2) perspectives on the potential benefits of EMI for future studies and work, and finally (3) students' perspectives on language in practice and its impact on their studies. I found some gender differences throughout the three perspectives. However, the magnitude of these differences varied both between perspectives, and between universities.

5.1 Language, confidence and learning effect

Both male and female students rated their English skills favourably. However, in Finland, the ratings differed between male and female students, with female

students scoring significantly lower than male students did. Furthermore, when being asked which language gave the best learning effect, there were relatively fewer female than male students who reported English to be a preferred language, alongside their L1.

These findings might strike one as puzzling, considering that on average women are reported to be more proficient in English than men (Education First, 2016). Assuming that the gender differences in actual proficiency in the study population resemble that of the population in general, it seems likely that the difference in reported skills between the genders is a result of female students having less self-confidence than their male counterparts. This could have detrimental effects on their academic performance, as confidence has been shown to affect academic performance (Robson et al., 2004) and the ability to present confident arguments (Leman, 1999), a skill that is of great importance for success in HE. Further, the mechanisms leading to lower self-confidence for female students, as described in the literature (see for instance Pulford & Sohal, 2006; Read et al., 2001; Robson et al., 2004), also seem to manifest themselves when it comes to confidence in one's L2 skills. This divergence between observed test-scores and self-reported skills was also found by Finnie & Meng (2005) in the Canadian context. They theorize that the psychology of skill self-assessment in itself is important, and that individuals assess their literacy levels relative to some local standard (i.e. education levels).

In addition, I found differences between productive skills (speaking and writing) and receptive skills (reading, listening to and understanding). That is, students are more confident in their receptive skills, where they do not have to participate actively. This goes to show that high confidence in one set of skills does not necessarily entail equally high confidence in another. This is in line with Robson et al. (2004), who point out that writing and speaking are two different skill sets.

5.2 Students' perspectives on EMI for further studies and work

Investigating students' perspectives on the potential benefits of EMI for further studies and work, I found no significant differences between male and female students in their score on the EMI index. That is to say, while male students were more confident in their own English skills, there were no such statistically significant differences between male and female students when it came to attitudes towards EMI.

There is a strong association between confidence and score on the EMI index. The higher the students rate their skills, the more positive they are towards EMI. Language confidence thus seems to be a stronger predictor of attitudes towards EMI than gender is. My analyses suggest, however, that female students might be slightly more positive towards EMI than male students are when controlling for language confidence – at least in the case of female students in Finland. In other words, for some female students, their enthusiasm might be tempered to a certain extent by their lack of self-confidence.

5.3 Students' perspectives on language in practice

In comparison to male students, female students on average report to participate less in classroom discussions when the language of instruction is English. In an earlier study, Romaine (2003) showed that, compared to female students, male

students took the floor more often. Whereas Romaine's findings were retrieved from an L1-classroom, I find the same effect reported in educations where English is used, more or less systematically as the means for communication. In their study, Macaro & Akincioglu (2018) show that female students in Turkish universities found it more difficult to speak in front of peers and lecturers. This raises the question of whether the introduction of EMI puts even more restraints on female students, who were already less likely to speak up in class.

As can be expected from the disparity between male and female students in levels of confidence, female students report, more often than male students, that they spend more time understanding syllabus written in English. On average, female students also report spending more time remembering English academic texts. In sum, there is a tendency that, as compared to male students, female students find EMI to be more challenging.

5.4 Are there any gender differences in attitudes towards language use?

In both countries, female students agree more with statements describing challenges with EMI. There were relatively fewer female than male students who reported that English gave them the best learning effect.

The present results suggest that the differences between male and female students in how they judge language use in HE should not be framed as being in favour of *either* English *or* their L1. Students' views on language use are more complex. As is shown when comparing the answers of male and female students to questions regarding how language practices affect student participation and learning, EMI might affect learning more negatively for female students than for male students. Rather than differing in their normative views on the advantages of EMI in general, the main divide between gender attitudes seems to be in how the students evaluate EMI in practice.

6 Concluding remarks

6.1 Limitations

Some limitations of the present study should be addressed. Students are extracted from three academic disciplines, *law*, *philosophy* and *natural sciences* at two universities. Even if these three disciplines are quite different from one another, and as such are likely to represent a broad array of language attitudes, there might exist traits or traditions in other disciplines or other HE institutions that have bearing on language attitudes. Furthermore, one should take into account the somewhat low response rate when judging the external validity of the findings in this study. However, as attested in the methods section, the background characteristics, i.e. age and gender, of the study sample are relatively consistent with the population at the universities.

Some could argue that the association between gender and language attitudes might be a spurious correlation, that is, it is not the effects of gender per se that is being measured, but some underlying confounding variable. As described in the methods section, some potential confounding variables, such as previous education and disciplinary fields, were tested and included in the analyses. A variable not included in my study, which has been proposed as a factor

influencing language attitudes, is socioeconomic class (Leman, 1999; Lueg & Lueg, 2015; Robson et al., 2004). However, I would argue that it is unlikely that female and male students should differ substantially in their socioeconomic class. Furthermore, even if a proportion of differences in attitudes should be the result of confounding factors not covered in the analyses, any systematic differences between genders will be of interest as a way to broaden our understanding of differences in perspectives on language use in the educational context.

6.2 Implications for language policy

The study extends existing knowledge by showing the complex relations between gender and confidence in students' perspectives on language use within the academic context. Taken together with the answers to the question of which language that gave the best learning effect, these findings suggest that despite students showing generally high levels of confidence in English, nonetheless, they report learning more efficiently in their L1. One important approach for HE institutions who want to prepare students for further studies and education would be for policy-makers and lecturers to acknowledge the gap between learning in an L1 as opposed to an L2, and thereby offer strategies for students to master the language practices they meet in the HE context.

The fact that female students, more than male students, find the use of an L2 to be a challenge, suggests that the active participation of female students in the classroom should be encouraged more. Previous research has shown that confidence is very important in the academic context (Clément, Baker, & Macintyre, 2003; Stankov, Morony, & Lee, 2014). Seeking to eliminate sources of systematic gendered inequalities in the HE sector, one should address the difference in confidence between male and female students. However, as the difference is statistically significant only in the case of the Finnish students, one should refrain from arguing that introducing EMI inevitably sets female students at a disadvantage. Linguistic sex differences may often change from one place to another, as such differences reflect social constructions which interact with other social phenomena (Eckert, 1989). The more marked gender differences in Finland than in Norway, points to an area which could be an interesting topic for further research.

In fact, granting that there are differences between male and female students in how they cope with EMI, it is important to avoid making parity in self-confidence between genders our sole object. It is important to educate all students about how language competence can provide deeper knowledge of a subject and at the same time ease active participation in classroom activities. The positive effects bilingual education holds for students, e.g. to become proficient language users of the academic language in both English and the local language, would benefit both male and female students, and especially those students who independent of gender lack confidence in their own language skills.

Whereas the volume of EMI has increased rapidly (Wächter & Maiworm, 2014), what seems to lack at university level is the insight that independent of what language you learn in, language plays an important role in learning and adaption to HE. These insights should be implemented in the pedagogical considerations at the planning-stage of a course, and at policy-level. On the policy or institutional level, measures could include courses in academic writing, in addition to developing and offering students bilingual word lists. Furthermore, academic

staff should be made aware of how lack of confidence in one's language skills can become a barrier to learning, both through making the content harder to understand, and also through making it more intimidating for students to participate actively in class.

As Doiz, Lasagabaster, & Sierra (2013) has pointed out that in order to become a functionally multilingual university, the universities should develop a clear-cut language policy that explicitly states the objectives to be reached for. They should also introduce tools and indicators to measure how objectives are fulfilled. I hope that the findings presented in this study help universities in developing such tools and strategies. The analyses presented in this article should form a basis for more research into the role of language in education focussing on the heterogeneity of the student group. Even further, this study shows the importance of broadening the scope of language research to include different context where language(s) play a role in both teaching, acquisition of knowledge and to acquire confidence in mastering the academic genre.

This paper has explored the relationship between gender and language attitudes among students by introducing three different perspectives on language use in HE: (1) language confidence and learning effect, (2) normative attitudes towards EMI, and (3) students' perspectives on language in practice. Despite the obvious challenges with assigning group membership based on biological sex (see Norton & Pavlenko, 2004), this study shows that gender can play a role in shaping attitudes towards language(s). However, focussing on only one perspective would obscure both the varying relationship between gender and attitudes from one perspective to the next, and the complex ways in which these perspectives are interconnected.

The perspectives are meant as a conceptual tool not only for analytical purposes, but also for practical use in language planning in HE. Avoiding to include all three perspectives when introducing EMI measures can lead to ill-informed decisions. For instance, if the HE institutions base all of their language policies on only the normative aspects, there is a real risk of being blindsided by the positivity from students when it comes to the arguments for introducing EMI. While almost all students normatively are positive towards EMI, there is a substantial part of those who are positive who also report that they face challenges when trying to understand English teaching and reading material, and when participation in class requires the use of English. If the institutions are not aware that many students experience such challenges, one cannot expect EMI to be implemented in ways that adequately meet the needs of the student group as a whole.

Acknowledgements

I would like to thank the students who participated in the study, and the universities for allowing me to carry out the survey. Gunnar Husabø (Western Norway University of Applied Sciences) have provided highly valuable help with the statistical analyses. Finally, many thanks to the anonymous reviewers, as well as the editorial team for highly valuable feedback.

References

- Abouserie, R. (1994). Perceived academic stress, gender and subject of study in university students. *Welsh Journal of Education*, 4(1), 40–44.
- Airey, J. (2011). Talking about teaching in English: Swedish university lecturers' experiences of changing teaching language. *Iberica*, (22), 35–54.
- Airey, J., & Linder, C. (2009). A disciplinary discourse perspective on university science learning: Achieving fluency in a critical constellation of modes. *Journal of Research in Science Teaching*, 46(1), 27–49.
- Airey, J., Lauridsen, K. M., Räsänen, A., Salö, L., & Schwach, V. (2017). The expansion of English-medium instruction in the Nordic countries: Can top-down university language policies encourage bottom-up disciplinary literacy goals? *Higher Education*, 73(4), 561–576.
- Altbach, P. G., & Knight, J. (2007). The internationalization of higher education: Motivations & realities. *Journal of Studies in International Education*, 11(3–4), 290–305.
- Becher, T., & Trowler, P. R. (2001). *Academic tribes and territories: Intellectual enquiry and the culture of disciplines* (2nd ed.). Buckingham: Society for Research into Higher Education / Open University Press.
- Björkman, B. (2014). Language ideology or language practice? An analysis of language policy documents at Swedish universities, *Multilingua* 33(3–4), 335–363.
- Bukve, T. (2018). Students' perspectives on English medium instruction: A survey-based study at a Norwegian university. *Nordic Journal of English Studies* 17(2), 215–242.
- Clément, R., Baker, S., & Macintyre, P. (2003). Willingness to communicate in a second language: The effects of context, norms, and vitality. *Journal of language and social psychology*, 22(2), 190–209.
- Colman, A. M. (2015). *A dictionary of psychology*, Oxford University Press.
- Doiz, A., Lasagabaster, D., & Sierra, J. (2013). Globalisation, internationalisation, multilingualism and linguistic strains in higher education. *Studies in Higher Education*, 38(9), 1407–1421.
- Eckert, P. (1989). The whole woman: Sex and gender differences in variation. *Language variation and change*, 1(3), 245–267.
- Education First (2016). *EF English Proficiency Index*. Retrieved January 1, 2017, from <http://www.ef.no/eipi/>
- Finnie, R., & Meng, R. (2005). Literacy and labour market outcomes: Self-assessment versus test score measures. *Applied Economics*, 37(17), 1935–1951.
- Gregersen, F., Josephson, O., Godenhjelm, S., Londen, M., Östman, J. O., Kristinsson, A. P., ... Thøgersen, J. (2014). *Hvor parallelt: Om parallellspråkighet på Nordens universitet*. TemaNord, Copenhagen: Nordisk Ministerråd.
- Hall, R. M., & Sandler, B. R. (1982). The classroom climate: A chilly one for female? Retrieved from https://www.aacu.org/sites/default/files/files/publications/Classroom_Climate_ChillyOne.pdf
- Harrop, A., Tattersall, A., & Goody, A. (2007). Gender matters in higher education. *Educational Studies*, 33(4), 385–396.
- Hultgren, A. K., Gregersen, F., & Thøgersen, J. (2014). *English in Nordic universities: Ideologies and practices*. Amsterdam: John Benjamins Publishing Company.
- Kristiansen, T., & Sandøy, H. (2010). *Introduction. The linguistic consequences of globalization. The Nordic Countries*: de Gruyter.
- Kuteeva, M. (2014). The parallel language use of Swedish and English: the question of 'nativeness' in university policies and practices, *Journal of Multilingual and Multicultural Development*, 35(4), 332–344.
- Kuteeva, M., & Airey, J. (2014). Disciplinary differences in the use of English in higher education: reflections on recent language policy developments. *The International Journal of Higher Education Research*, 67(5), 533–549.
- Leman, P. J. (1999). The role of subject area, gender, ethnicity and school background in the degree results of Cambridge University undergraduates. *The Curriculum Journal*, 10(2), 231–252.

- Ljosland, R. (2015). Policymaking as a multi-layered activity. A case study from the higher education sector in Norway. *Higher Education*, 70(4), 611–627.
- Lueg, K., & Lueg, R. (2015). Why do students choose English as a medium of instruction? A Bourdieusian perspective on the study strategies of non-native English speakers. *Academy of Management Learning & Education*, 14(1), 5–30.
- Macaro, E. & Akincioglu, M. (2018). Turkish university students' perceptions about English Medium Instruction: exploring year group, gender and university type as variables. *Journal of Multilingual and Multicultural Development*, 39(3), 256–270.
- Macaro, E., Curle, S., Pun, J., An, J., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, 51(1), 36–76.
- Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41–51.
- Neumann, R. (2001). Disciplinary differences and university teaching. *Studies in Higher Education*, 26(2), 135–146.
- Norton, B., & Pavlenko, A. (2004). Addressing gender in the ESL/EFL classroom. *TESOL Quarterly*, 38(3), 504–514.
- Pulford, B. D., & Sohal, H. (2006). The influence of personality on HE students' confidence in their academic abilities. *Personality and Individual Differences*, 41(8), 1409–1419.
- Read, B., Francis, B. & Robson, J. (2001). 'Playing Safe': Undergraduate essay writing and the presentation of the student 'voice'. *British Journal of Sociology of Education*, 22(3), 387–399.
- Robson, J., Francis, B., & Read, B. (2004). Gender, student confidence and communicative styles at university: the views of lecturers in history and psychology. *Studies in Higher Education*, 29(1), 7–23.
- Romaine, S. (2003). Variation. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 409–435). Oxford: Blackwell.
- Saarinen, T. & Taalas, P. (2017). Nordic language policies for higher education and their multi-layered motivations. *Higher Education*, 73(4), 597–612.
- Salter, D. W. (2003). Salter, D. W. (2003). Exploring the "chilly classroom" phenomenon as interactions between psychological and environmental types. *Journal of College Student Development*, 44(1), 110–121.
- Sommers, E., & Lawrence, S. (1992). Female's ways of talking in teacher-directed and student-directed peer response groups. *Linguistics and Education*, 4(1), 1–35.
- Stankov, L., Morony, S., & Lee, Y. P. (2014). Confidence: The best non-cognitive predictor of academic achievement? *Educational Psychology*, 34(1), 9–28.
- Statistics Finland (2017, May 10). *University education*. Retrieved September 11, 2017 from https://www.stat.fi/til/yop/2016/yop_2016_2017-05-10_en.pdf
- Statistics Norway (2016, April 14). *Students in higher education*. Retrieved September 11, 2017, from <https://www.ssb.no/en/utdanning/statistikker/utuvh/aar/2016-04-14>
- Thompson, A. S., & Sylvén, L. K. (2015). Does English make you nervous? Anxiety profiles of CLIL and non-CLIL students in Sweden. *Apples-Journal of Applied Language Studies*, 9(2), 1–23.
- van Der Slik, F. W., van Hout, R. W., & Schepens, J. J. (2015). The gender gap in second language acquisition: Gender differences in the acquisition of Dutch among immigrants from 88 countries with 49 mother tongues. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4634989/>
- Wächter, B. & Maiworm, F. (2014). *English-taught programmes in European higher education: The state of play in 2014*. Bonn: Lemmens Medien GmbH.
- Wendt, H. W. (1972). Dealing with a common problem in social science: A simplified rank-biserial coefficient of correlation based on the U statistic. *European Journal of Social Psychology*, 2(4), 463–465.

Received April 10, 2019

Revision received February 9, 2020

Accepted February 11, 2020